

51-7

L-13

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
CUY-71-10.16

I-71-5(16)244

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-71-5(16)244

1
150CUYAHOGA COUNTY
CUY-71-10.16

PART 3

FOR PARTS 1 & 2, SEC CUY-71-9.60

LIMITED ACCESS

GRADE SEPARATION WITH THE NEW YORK CENTRAL RAILROAD CO.

CITY OF CLEVELAND
CUYAHOGA COUNTY

This improvement is especially designed for
Through traffic and has been declared a limited
access highway or freeway by action of the
Director of Highways in accordance with the
provisions of Section 5511.02 of the Revised
Code of Ohio.

1963 SPECIFICATIONS

The standard specifications of the State of Ohio
Department of Highways, including changes and supplemental
specifications listed in the proposal shall govern this
improvement.

The right of way for this improvement will be
provided by the State of Ohio.

I hereby approve these plans and declare that the making
of this improvement will not require the closing of the highway
to traffic and that provisions for the maintenance and safety
of traffic will be as set forth on these plans and estimates.

Approved Charles M. FurickDate 3-11-65 Division Deputy DirectorApproved C. H. AlbrechtDate 4-9-65 Engineer of BridgesApproved R. D. BickelDate 4-14-65 Engineer of Location and DesignApproved R. B. SmithDate 4-14-65 Deputy Director of Design and ConstructionApproved T. H. B. B. B.Date 3-15-65 Deputy Director of Right of WayApproved J. W. WilsonDate 4-21-65 Deputy Director of Planning and ProgrammingApproved First Assistant DirectorDate 4-22-65 Director of HighwaysApproved Paul E. ResslerDate 3-11-65 Director of Public Service, City of Cleveland, Ohio

CONVENTIONAL SIGNS

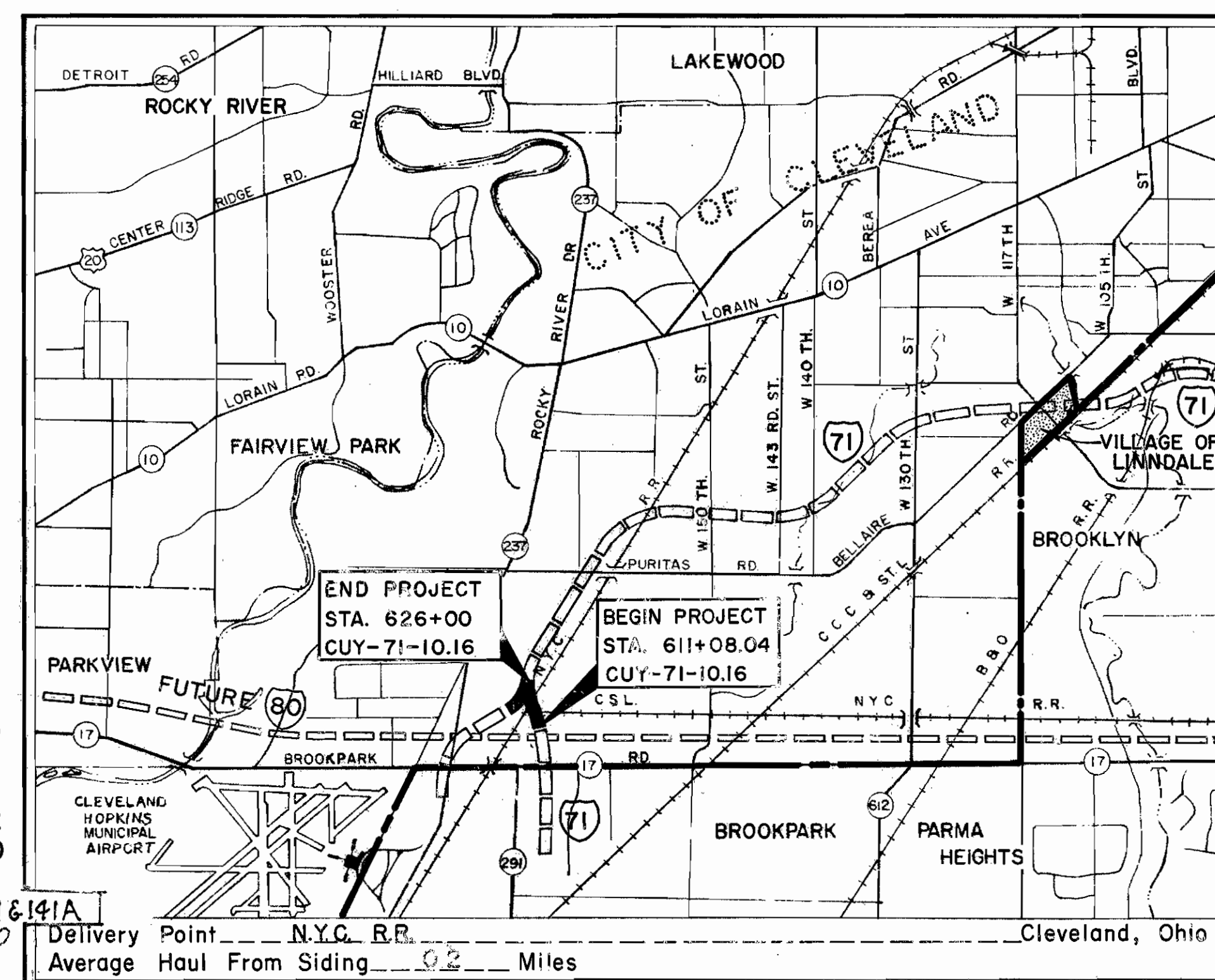
County Line	-----
Corporation Line	-----
Center Line	-----
Township Line	-----
Section Line	-----
Fence Line	-----
Guard Rail (existing)	-----
Guard Rail (proposed)	-----
Railroad	-----
Power Poles	-----
Telephone Poles	-----
Trees or stumps (existing)	-----
Trees or stumps (to be removed)	-----
Existing Right of Way	-----
Limited Access Only	-----
Right of Way Only	-----
Limited Access & Right of Way	-----

INDEX SHEETS

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LINE DATA

Begin Project	Sta. 611+08.04
End Project	Sta. 626+00.00
Net Length of Project	= 1491.96 Lin. Ft. = 0.282 Miles
ADD FOR APPROACHES	
Airport Freeway	Sta. 614+35.00 - Sta. 626+95.00 = 1260.00 Lin. Ft.
	Sta. 626+00.00 - Sta. 626+95.00 = 95.00 Lin. Ft.
Net Length of Approaches	= 1355.00 Lin. Ft.
Net Length of Work	= 2846.96 Lin. Ft. = 0.539 Miles

LOCATION MAP
SCALE OF MILES

Portion to be improved -----
State Roads -----
Construction under other contract -----
Other Roads -----

SCALES

Plan -----
Profile: Horizontal -----
" Vertical -----
X-Sections -----

Sheet No. 53 revised
11-23-65 C.E.H.Revised sheet No. 53
11-5-65 C.E.H.

Sheet 131 revised 6-24-65.
Sheets 42 & 43 superseded by
sheets 42R & 43R respectively, 6-24-65.
Sheets 13, 15 & 17 revised 8-2-65.
Sheets 113, 115 & 117 revised 11-9-65.
Sheet 107 revised 5-1-65.

Supplemental
Specifications

CE-101.04 5-22-56

S-301 7-18-64

S-307 10-1-64

SEE PART 1

T-335 12-28-63

PLANS PREPARED BY
RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO
Melvin Rackoff
MELVIN RACKOFF

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER

DATE

File No.	CUYAHOGA COUNTY	CUY-71-10.16
Date of Letting	19	
Contract No.		

Supplemental Prints of Standard Construction Drawings											
AS 1-54	7-5-62	HW-E	2-1-63	I-8 M.H. NO. 2	2-1-63	I-15 NO. 6	2-1-63	L-3	4-1-50	AR-1-57	4-2-62
B-T-70-71	11-15-60	HW-NO 1	8-1-63	I-8 M.H. NO. 1-A	2-1-63	I-21-23	3-10-64	L-3A	4-1-50	RB-1-55	2-2-59
B-T-71R	3-2-53	I-1	11-15-60	I-12	2-1-63			LJ NO 1	7-1-55	FSB-1-62	1-15-63
		I-8 C.B. NO 5	2-1-63							SD-1-63	11-12-63
F-1	2-1-63	I-8 I NO 2	2-1-63	I-15 NO 1	11-15-60	L-1	4-1-50			SD-2-64	11-25-64
F-3	2-1-63	I-8 I NO 2-A	2-1-63	I-15 NO 2-A	8-17-60	I-2	4-1-50	T-1	9-12-60		

MICROFILMED
AUG 10 1982

CUYAHOGA COUNTY
CUY - 171 - 10.16



		CLASS A VEH.	CLASS B & C VEH.	TOTAL
I 71	A. D. T.	35,085	5,889	40,974
RAMP A	A. D. T.	2,579	309	2,888
AIRPORT FREEWAY	A. D. T.	73,581	12,207	85,788

NOTE: "G" Indicates welded girder spans

TYPE: Continuous welded steel girders and steel beams with reinforced concrete deck and substructures.

SPANS: See table.

ROADWAY: N.B. Lanes-40' $\frac{1}{2}$ Parapets
S.B. Lanes-Varies for first 4 spans, 40' $\frac{1}{2}$
Parapets thereafter.
Ramp A - 28' $\frac{1}{2}$ parapets.

LOAD FREQUENCY: CF 2000 (57) (Adequate for
A.A.S.H.O. alternate loading).

SKEW: Varies - see "Pier Location Plan" sheet.

WEARING SURFACE: 1" Monolithic concrete.

APPROACH SLABS: AS-1-54, 25' long.

ALIGNMENT: N.B. Lanes-400' spiral, 5° curve Rt. & 400' spiral.
S.B. Lanes-Tangent, 400' spiral & 5° curve Rt.
Ramp A - 250' spiral & 350' R curve Lt.

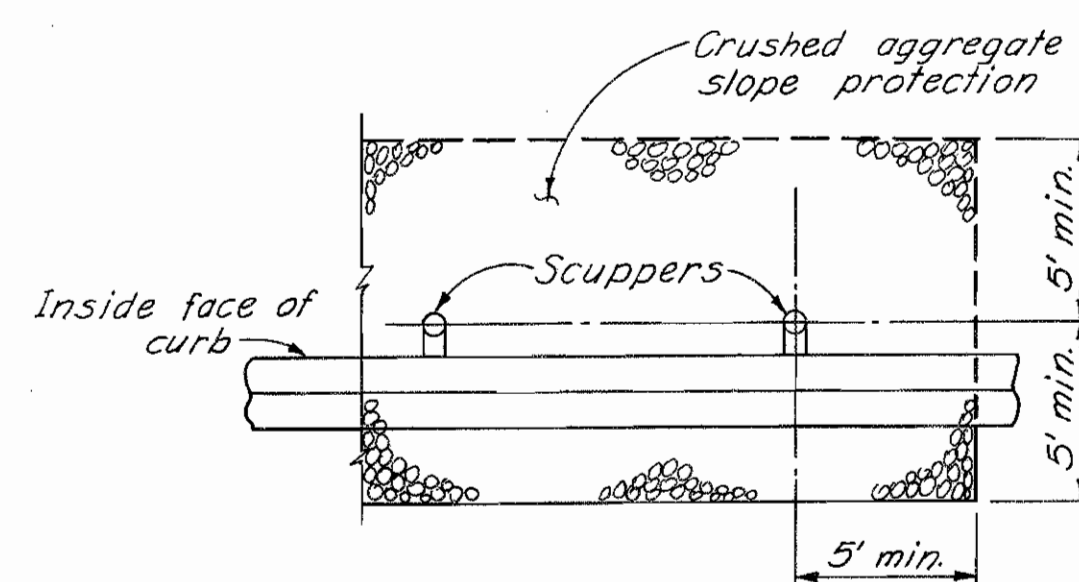
SUPERELEVATION: Varies (1 inch per foot max.)

RACKOFF ASSOCIATES
ENGINEERS COLUMBUS, OHIO

BRIDGE NO. CUY-I71-1018 L & R
I71 OVER N.Y.C. R.R. AND AIRPORT FREEWAY
CUYAHOGA CO. N.B.L.STA.612+32.79 to 624+02.16
S.B.L.STA.610+94.88 to 624+77.41

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
P. M.	M. R.		R.A.K.	<i>[Signature]</i>	2-27 65	8-2-65

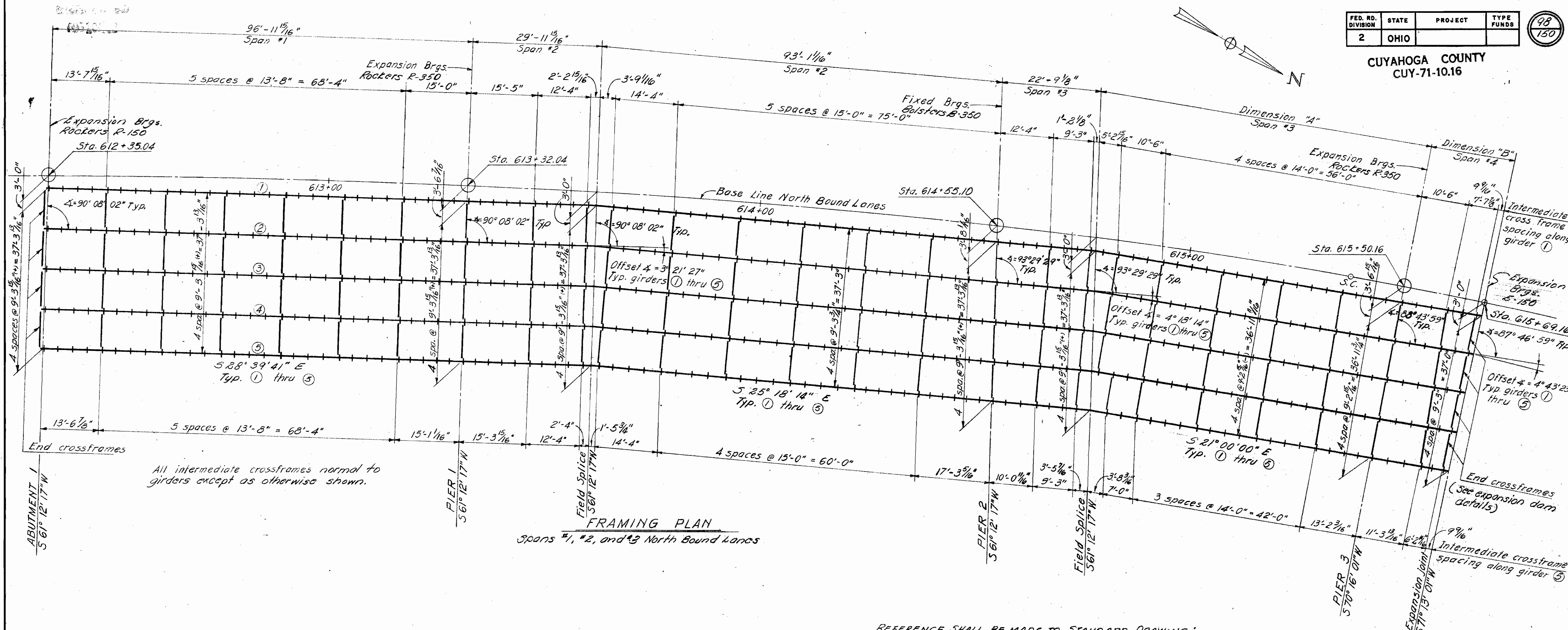
CRUSHED AGGREGATE SLOPE PROTECTION



For location of scuppers see Sheet No. 137.

HORIZONTAL CURVE DATA				
	N.B. LANES	S.B. LANES	RAMP A	AIRPORT FREEWAY
P.I. Sta.	620+27.64	623+07.61	618+22.18	618+34.86
Δ	61°52'08"R	74°05'45"R	79°35'14"L	36°30'00"L
Dc	5°00'00"	5°00'00"	16°22'13"	4°30'00"
Rc	1145.916'	1145.916'	350.000'	1273.239'
Ls	400'	400'	250'	350'

CUYAHOGA COUNTY
CUY-71-10.16



FRAMING PLAN
Spans #1, #2, and #3 North Bound Lanes

REFERENCE SHALL BE MADE TO STANDARD DRAWING:

F.S.B.-1-62 for bearing at expansion joints,
R.B.-1-55 for bearing at piers and abutments,
which are not shown on sheet 131 and 132.

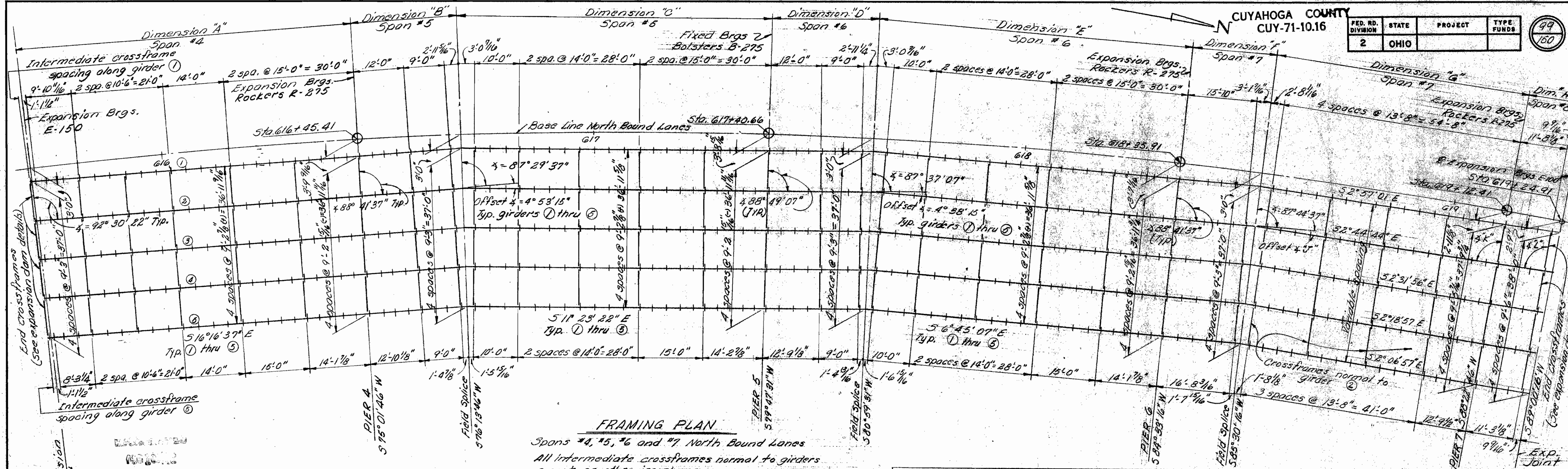
S.D.-1-63, sheets 2, 3 and 4, for end crossframes,
end dams, scuppers, bulb angle gutters and
curb plates.

S.D.-2-64 for bolted beam splices.

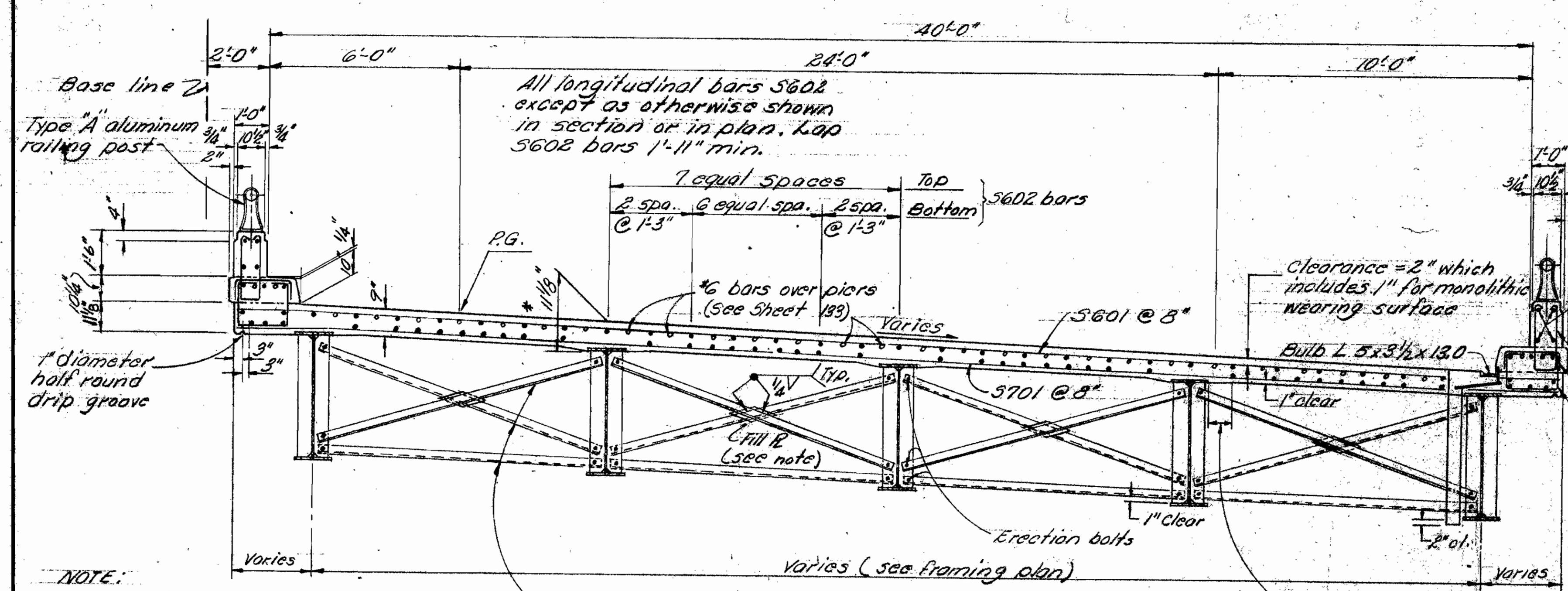
A.R.-1-57 for Type A aluminum railing.

LOCATION	DIMENSION	
	"A"	"B"
Girder Line ①	71'-8 1/16"	18'-11 1/16"
Girder Line ②	70'-3 5/16"	18'-9 3/8"
Girder Line ③	68'-9 1/16"	18'-7 3/4"
Girder Line ④	67'-4 1/16"	18'-5 1/16"
Girder Line ⑤	65'-10 3/8"	18'-4 1/16"

RACKOFF ASSOCIATES ENGINEERS					
CLEVELAND, OHIO			COLUMBUS, OHIO		
FRAMING PLAN SPANS 1-3 N.B.L.					
BRIDGE NO. CUY-171-1018 L & R					
171 OVER N.Y.C. R.R. AND AIRPORT FREEWAY					
CUYAHOGA CO.					
Designed	Drawn	Traced	Checked	Reviewed	Date
R.A.K.	R.A.K.	M.R.	H.H.	666 2-27-65	



LOCATION	DIMENSION								ANGLE		
	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"	"L"
Girder Line ①	76'-0 3/4"	23'-11 3/4"	71'-0 1/4"	29'-11 1/4"	71'-0 1/4"	18'-11 3/4"	57'-4 1/8"	12'-5 5/8"	3° 48' 06"	91° 19' 47"	91° 57' 17"
Girder Line ②	75'-4 1/4"	23'-9"	70'-5 1/4"	28'-8 1/4"	70'-5 1/4"	18'-9 5/8"	56'-10 1/4"	12'-4 7/8"	4° 00' 23"	91° 07' 30"	91° 45' 00"
Girder Line ③	74'-9 1/4"	23'-6 3/8"	69'-10 5/8"	28'-6 5/8"	69'-10 5/8"	18'-7 3/4"	56'-4 3/4"	12'-3 3/4"	4° 13' 11"	90° 54' 42"	91° 32' 12"
Girder Line ④	74'-2 1/4"	23'-4 3/4"	69'-9 3/4"	28'-4 1/4"	69'-9 3/4"	18'-5 7/8"	55'-11 1/4"	12'-1 1/4"	4° 26' 10"	90° 41' 43"	91° 19' 13"
Girder Line ⑤	73'-6 5/8"	23'-2"	68'-8 1/4"	28'-1 1/4"	68'-8 1/4"	18'-4 1/4"	55'-5 5/8"	12'-0 1/4"	4° 38' 10"	90° 29' 43"	91° 07' 13"



*The dimension from the top of the deck slab to the bottom of the top flange is the nominal dimension. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec 5-1.25 of the Construction and Material Specifications.

NOTE: Crossframe fill plates shall be of the same thickness as the girder stiffeners to which the crossframe is attached.

Intermediate crossframe angles 3x3x3/4". Weld to girder stiffeners with 1/4" continuous fillet weld. Erection bolts left in place on the permanent structure shall be tack welded.

NOTE: For other details and layout of reinforcing see sheet for deck plan North Bound Lanes.

A typical haunch width of 9" shall be used computing quantity of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.

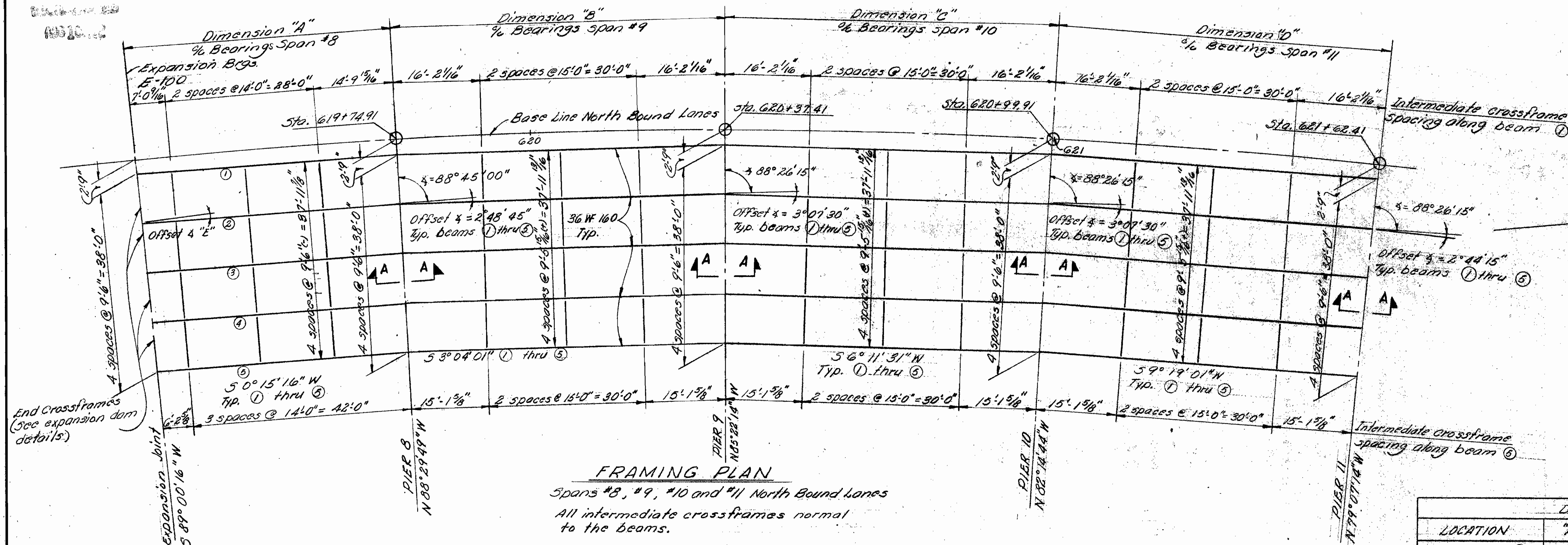
RACKOFF ASSOCIATES
ENGINEERS
CLEVELAND, OHIO COLUMBUS, OHIO

FRAMING PLAN SPANS 4-7 N.B.L.
BRIDGE NO. CUY-171-1018 L & R
171 OVER N.Y.C. R.R. AND AIRPORT FREEWAY

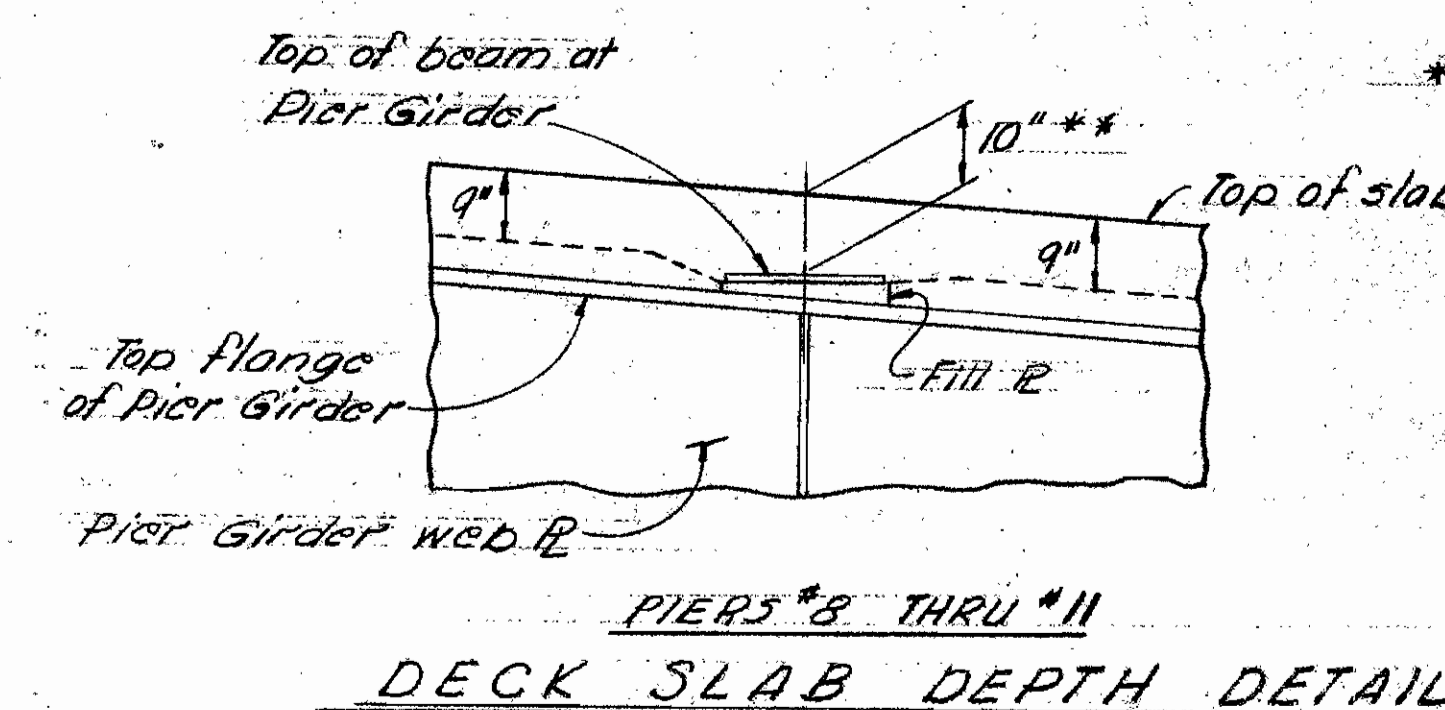
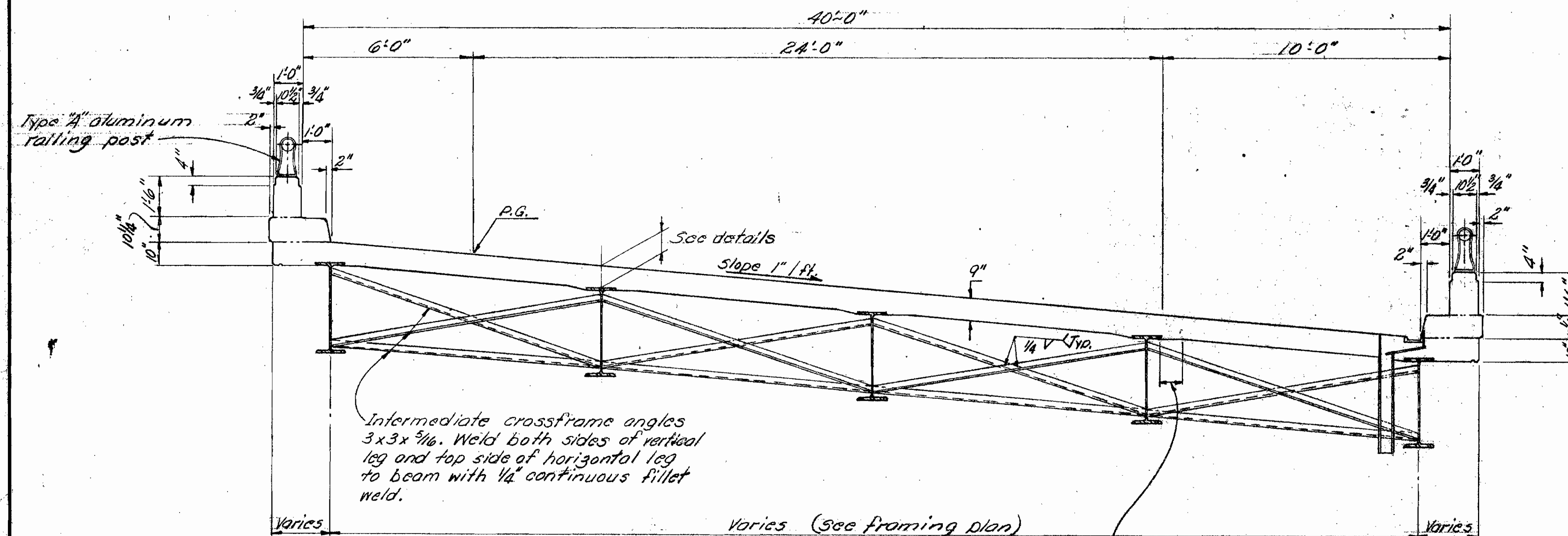
CUYAHOGA CO.

Designed	Drawn	Traced	Checked	Reviewed	Date	Sheet
RAK	RAK	EDA	H.H.	666	2-27-65	

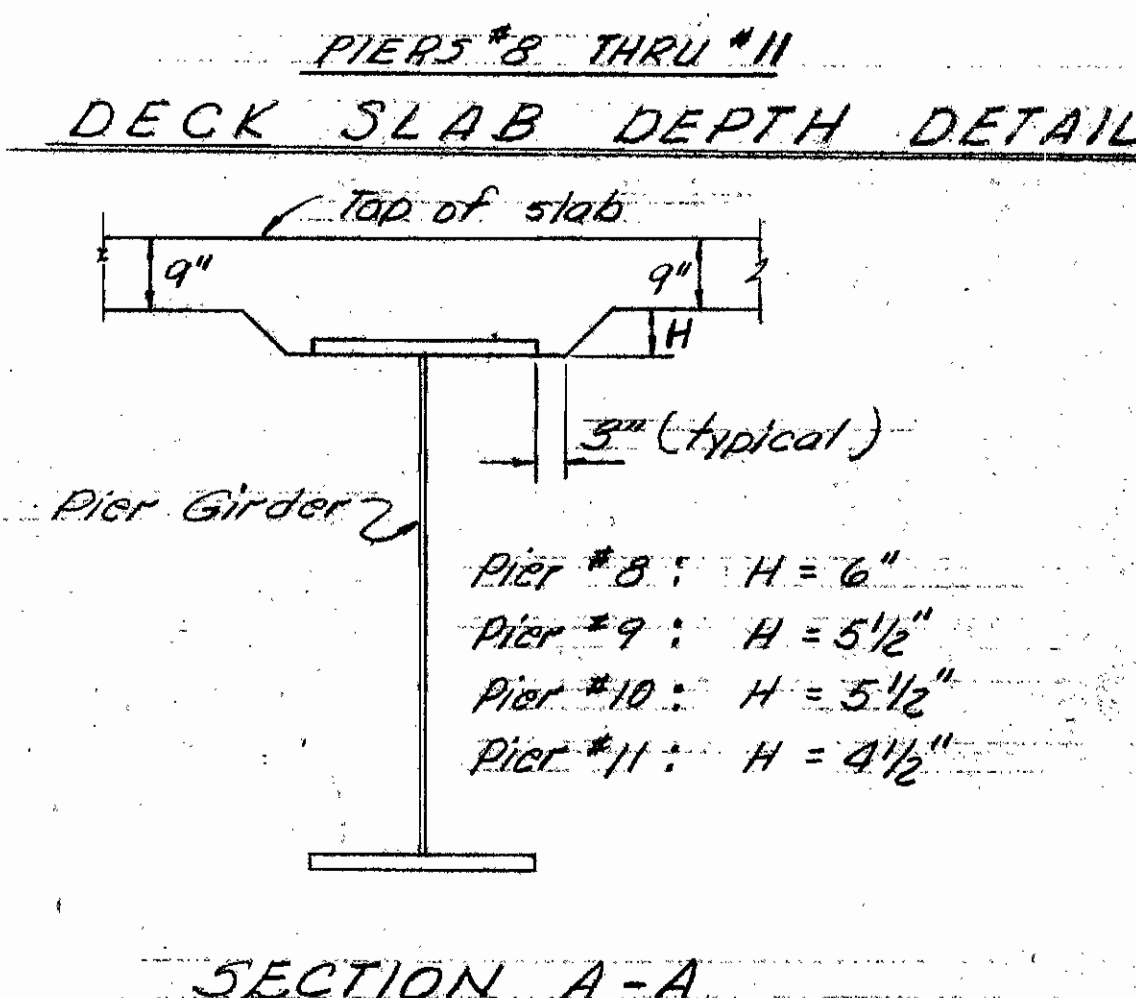
CUYAHOGA COUNTY
CUY-71-10.16

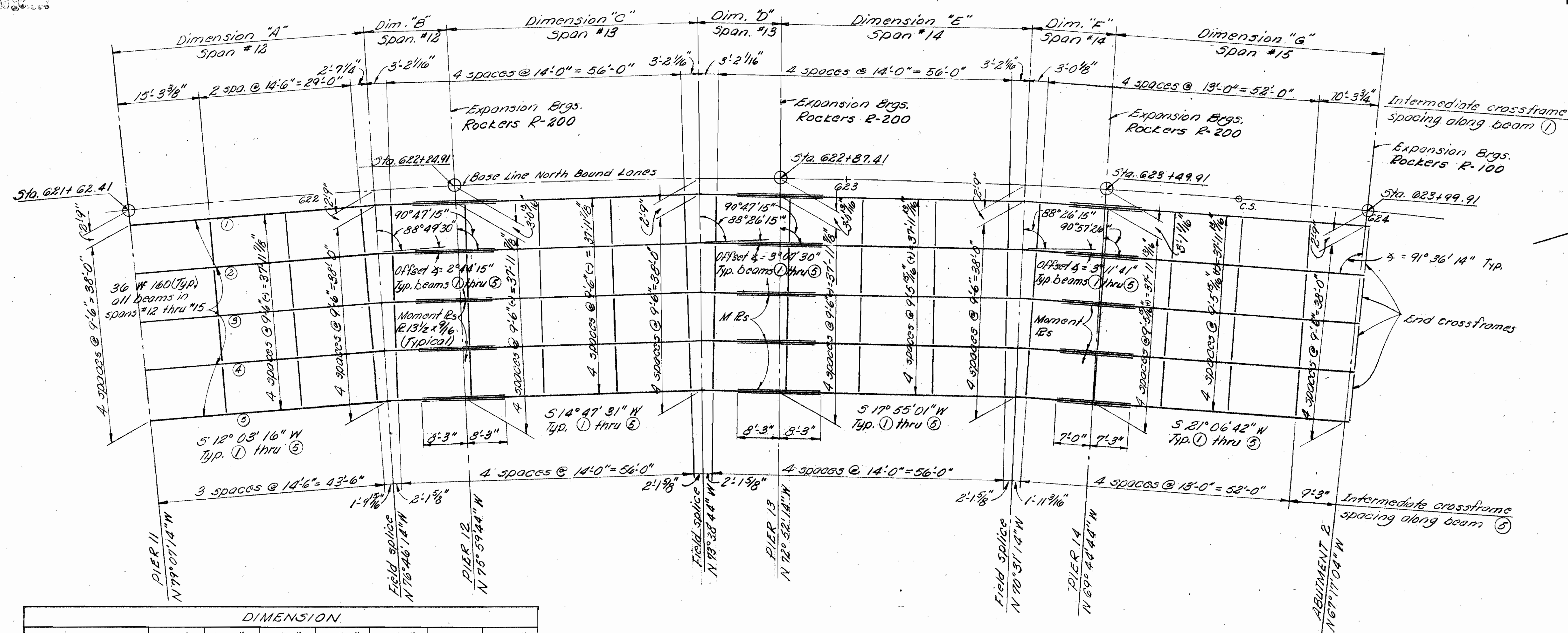


LOCATION	DIMENSION				ANGLE
	"A"	"B"	"C"	"D"	
Beam Line ①	49'-10 1/2"	62'-4 1/8"	62'-4 1/8"	62'-4 1/8"	3°12'17"
Beam Line ②	49'-5 1/16"	61'-9 1/8"	61'-9 1/8"	61'-9 1/8"	3°00'00"
Beam Line ③	49'-0 9/16"	61'-3 1/16"	61'-3 1/16"	61'-3 1/16"	2°47'13"
Beam Line ④	48'-7 7/8"	60'-9 1/16"	60'-9 1/16"	60'-9 1/16"	2°34'13"
Beam Line ⑤	48'-5 5/8"	60'-3 3/16"	60'-3 1/4"	60'-3 1/4"	2°22'13"



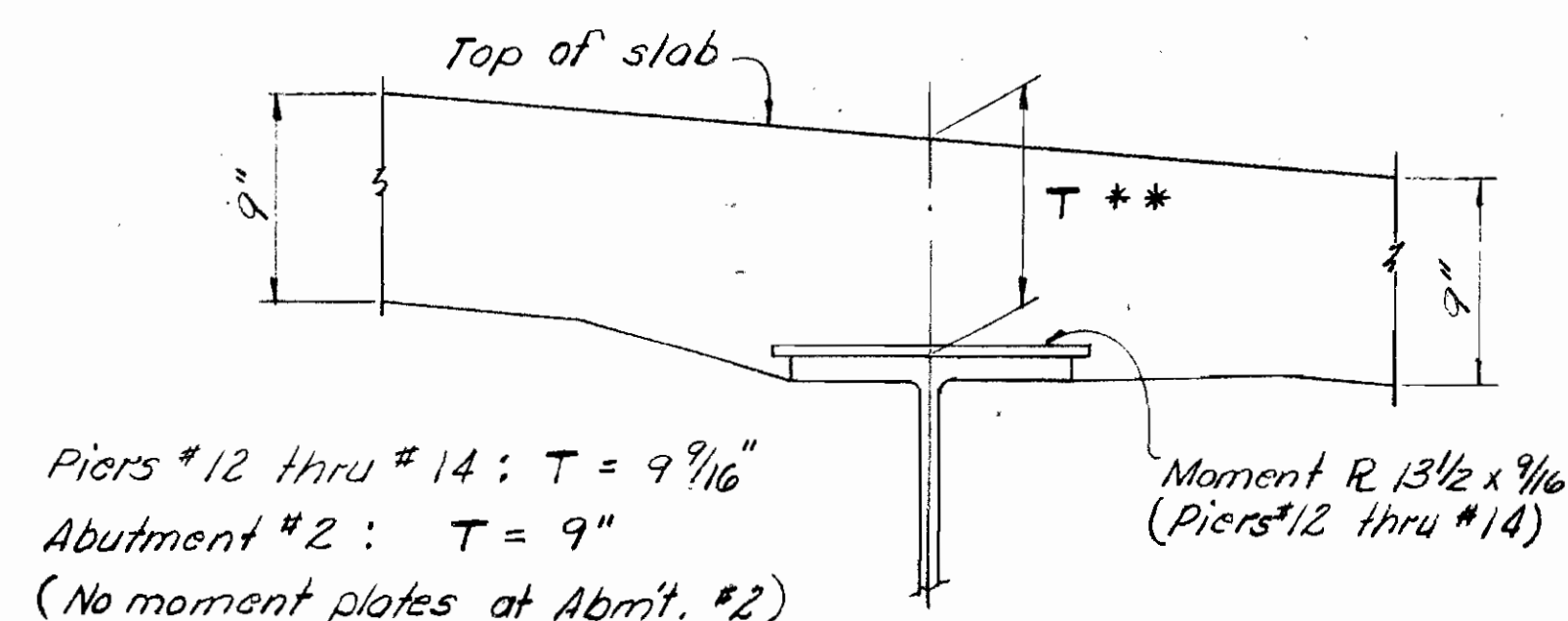
The distance shown from top of deck slab to top of steel beam is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.





LOCATION	"A"	"B"	"C"	"D"	"E"	"F"	"G"
Beam Line ①	46'-10 ⁵ / ₈ "	15'-5 ⁹ / ₁₆ "	46'-10 ⁹ / ₁₆ "	15'-5 ⁹ / ₁₆ "	46'-10 ⁹ / ₁₆ "	15'-5 ⁹ / ₁₆ "	49'-10 ³ / ₈ "
Beam Line ②	46'-5 ⁵ / ₁₆ "	15'-4"	46'-5 ⁵ / ₁₆ "	15'-4"	46'-5 ⁵ / ₁₆ "	15'-4"	49'-5 ¹ / ₂ "
Beam Line ③	46'-14 ¹ / ₂ "	15'-2 ¹ / ₂ "	46'-1 ³ / ₁₆ "	15'-2 ¹ / ₂ "	46'-1 ³ / ₁₆ "	15'-2 ¹ / ₂ "	49'-0 ⁹ / ₁₆ "
Beam Line ④	45'-8 ⁹ / ₁₆ "	15'-0 ⁵ / ₁₆ "	45'-8 ¹ / ₂ "	15'-0 ⁵ / ₁₆ "	45'-8 ¹ / ₂ "	15'-0 ⁵ / ₁₆ "	48'-7 ¹ / ₁₆ "
Beam Line ⑤	45'-3 ⁵ / ₁₆ "	14'-11 ¹ / ₁₆ "	45'-3 ¹ / ₁₆ "	14'-11 ¹ / ₁₆ "	45'-3 ¹ / ₁₆ "	14'-11 ¹ / ₁₆ "	48'-2 ¹ / ₁₆ "

FRAMING PLAN
Spans #12, #13, #14 and #15 N.B.L.
All intermediate crossframes normal to beams.



** Nominal dimension. See note on Sheet No. 100

DECK SLAB DEPTH DETAIL
PIER #12 THRU ABUTMENT #2